

State Indicators

S-48 Academic Science and Engineering Article Output per 1,000 Science, Engineering, and Health Doctorate Holders in Academia

Description

The volume of peer-reviewed articles published per 1,000 academic science, engineering, and health (SEH) doctorate holders is an approximate measure of their contribution to scientific knowledge. This indicator should not be seen as a measure of an individual's efficiency; publications are only one measure of academic productivity; other measures may include personnel trained, patents, trademarks, copyrights, and other outputs. A high value on this indicator shows that the SEH faculties in a state's academic institutions are generating a high volume of publications relative to the number of SEH doctorate holders employed at academic institutions in the state. Academic institutions include 2-year colleges, 4-year colleges and universities, medical schools, and university-affiliated research centers. Research is more central to the mission of some of these institutions than others.

Publication counts are based on the number of articles that appear in a set of journals tracked by Elsevier's Scopus database as of December 2016. The journal set consists of S&E publications (including publications on the natural sciences, applied sciences, medical sciences, and social sciences but excluding the arts and humanities). Only documents published in refereed scientific journals were counted (mostly articles, reviews, and conference proceedings), as these documents were reviewed by peers prior to being accepted for publication. The peer-review process is designed to ensure that the research is of good quality and constitutes an original contribution to scientific knowledge. Fractional counting at the level of researchers is used to ensure that a single paper is not counted several times. For example, if two of three authors are in state A and the third author is in state B, then two-thirds of the publication is attributed to state A, and one-third is attributed to state B.

SEH doctorates include those in computer sciences; mathematics; biological, agricultural, or environmental life sciences; physical sciences; social sciences; psychology; engineering; and health fields. SEH doctorate data are estimates and exclude those with doctorates from foreign institutions and those older than 75. Data for SEH doctorate holders in academia are presented by employment location, regardless of residence. Estimates for states with smaller populations of SEH doctorate holders are generally less precise than estimates for states with larger populations.

Nationally, both S&E article output and employment of SEH doctorate holders in academia have experienced long-term increases. However, the growth in article output has outpaced that of employment, meaning that this indicator has risen over time for most states and the nation overall.

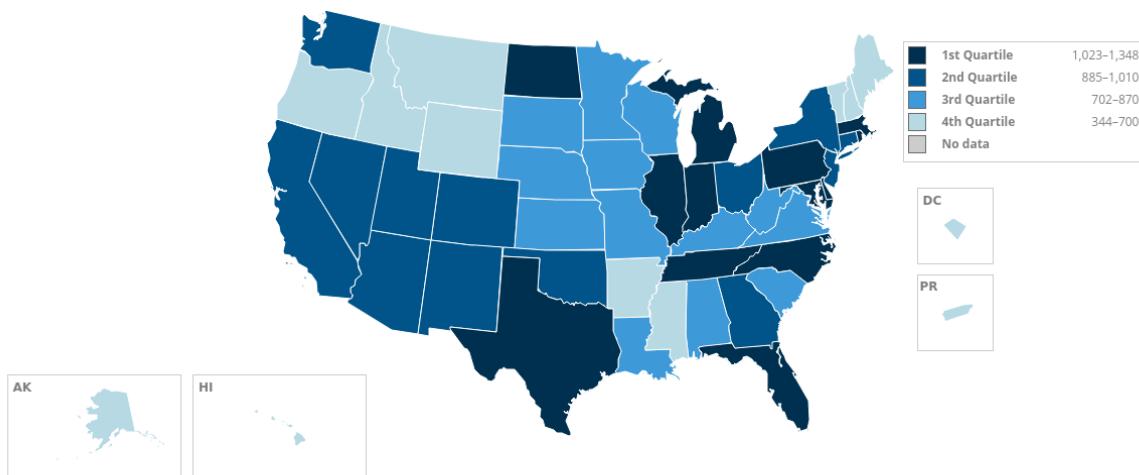
Data on employed SEH doctorate holders are collected by the Survey of Doctorate Recipients. Data include those with research doctoral degrees in computer and mathematical sciences; biological, agricultural, or environmental life sciences; physical sciences; social sciences; psychology; engineering; and health fields. SEH doctorate data exclude individuals with doctorates from foreign institutions and those older than 75. SEH doctorate holders are assigned to a state based on where they work.

Data sources: Science-Metrix, special tabulation from Scopus; National Science Foundation, National Center for Science and Engineering Statistics, Survey of Doctorate Recipients.

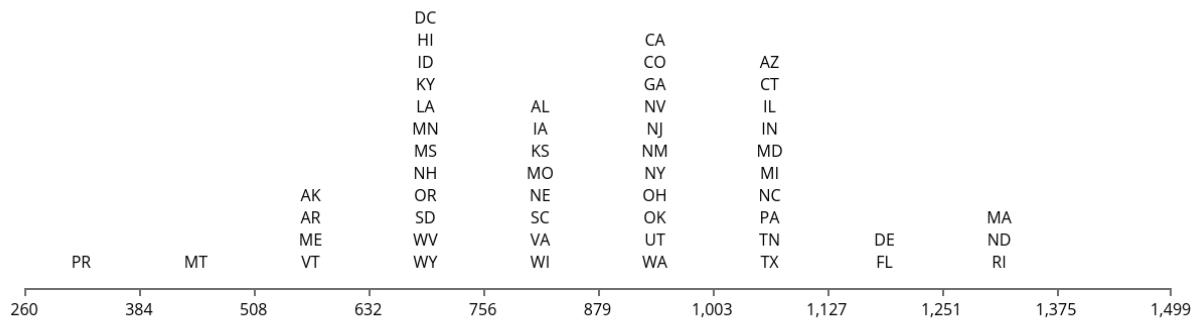
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2017



Distribution of states across indicator values, 2017



Histograms do not display states with extreme values. Please consult the data tables for exact indicator values for each state. State positions on the histogram are based on unrounded values of the indicator and may not always match the rounded values displayed in the table.

State Indicators

Academic Science and Engineering Article Output per 1,000 Science, Engineering, and Health Doctorate Holders in Academia

(Articles)

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
United States	857	884	832	854	973	1,016	985	1,013	955	967
Alabama	602	799	876	876	1,014	1,031	956	985	792	857
Alaska	469	515	462	453	547	581	564	556	519	613
Arizona	1,055	1,005	964	1,048	1,112	1,145	1,209	1,061	1,156	1,010
Arkansas	576	518	591	532	630	861	661	764	493	537
California	982	1,131	1,002	988	1,187	1,153	1,116	1,099	1,003	979
Colorado	796	823	776	753	866	940	874	949	910	960
Connecticut	933	841	856	924	1,037	969	948	1,065	1,062	1,010
Delaware	971	1,358	947	1,180	1,229	1,390	1,141	1,167	909	1,131
District of Columbia	959	771	730	809	903	1,048	990	890	702	700
Florida	929	898	823	887	1,074	1,093	987	924	1,073	1,166
Georgia	854	863	818	843	947	955	951	1,012	1,028	969
Hawaii	626	664	537	483	673	647	720	676	730	636
Idaho	571	520	482	453	485	505	550	538	635	659
Illinois	906	980	891	978	1,072	1,151	1,086	1,182	995	1,043
Indiana	936	866	761	836	996	1,090	1,023	1,026	969	1,037
Iowa	957	897	878	872	956	886	876	946	844	852
Kansas	734	876	765	775	771	741	918	934	783	777
Kentucky	623	657	599	644	708	800	767	806	747	702
Louisiana	715	839	686	752	812	936	987	949	779	727
Maine	322	345	370	397	460	447	531	470	400	513
Maryland	1,074	1,338	1,186	1,099	1,206	1,144	1,160	1,194	1,029	1,023
Massachusetts	1,191	1,177	1,135	1,083	1,318	1,499	1,451	1,454	1,364	1,318

State Indicators

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
Michigan	901	914	808	889	991	1,108	1,020	1,078	1,050	1,105
Minnesota	768	664	629	651	724	824	761	776	722	714
Mississippi	499	533	523	591	785	858	853	832	792	678
Missouri	743	804	766	786	929	979	892	870	858	824
Montana	363	398	559	452	531	523	466	482	518	401
Nebraska	621	802	721	787	985	991	865	1,072	869	840
Nevada	580	666	511	619	606	769	737	730	728	921
New Hampshire	661	688	639	750	940	719	741	772	765	691
New Jersey	860	896	775	857	917	936	891	891	887	959
New Mexico	557	756	419	441	734	700	668	682	783	886
New York	876	858	869	888	1,029	1,035	999	1,049	976	981
North Carolina	888	846	799	818	919	961	984	1,048	1,022	1,030
North Dakota	417	476	536	638	661	798	671	832	1,011	1,329
Ohio	785	772	784	804	945	1,018	981	1,021	897	929
Oklahoma	523	591	501	553	651	684	645	761	798	885
Oregon	821	762	699	676	835	939	851	848	639	691
Pennsylvania	1,008	926	923	883	1,012	1,142	1,100	1,160	992	1,088
Rhode Island	725	753	743	671	842	995	1,116	1,170	1,330	1,348
South Carolina	541	669	653	735	714	768	791	841	1,012	797
South Dakota	333	320	349	394	461	577	664	701	766	709
Tennessee	674	718	675	685	769	853	791	887	945	1,070
Texas	940	1,024	936	963	1,030	1,044	1,023	1,088	992	1,044
Utah	728	854	727	858	844	896	947	935	925	887
Vermont	466	476	509	502	659	720	738	714	495	526
Virginia	827	681	737	754	798	807	827	881	842	854
Washington	800	844	708	738	779	796	814	807	853	889

State Indicators

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
West Virginia	551	475	537	560	615	683	702	641	770	752
Wisconsin	760	792	773	863	888	889	805	804	906	870
Wyoming	529	502	419	606	776	844	880	1,080	1,053	644
Puerto Rico	492	324	283	337	430	422	398	260	334	344

Note(s):

Articles were fractionally allocated among regions/countries/economies based on the proportion of residences of all named authors. The publication total for the United States reported here includes Puerto Rico, as well as articles for which the location could not be determined. Employed SEH doctorate holders are classified by employment location.

Source(s):

Science-Metrix, special tabulations from Scopus, data as of July 2019; National Center for Science and Engineering Statistics, National Science Foundation, Survey of Doctorate Recipients (various years), data as of February 2019.

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Science and Engineering Indicators

State Indicators

Academic S&E article output

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
United States	204,771	203,332	198,535	196,742	207,078	209,385	221,121	229,272	247,614	267,299
Alabama	2,869	2,745	2,609	2,557	2,612	2,628	2,696	2,785	3,075	3,258
Alaska	206	211	223	206	214	245	258	272	269	372
Arizona	3,048	3,082	2,937	2,915	3,152	3,056	3,270	3,572	3,776	4,153
Arkansas	843	875	823	854	897	945	989	979	1,148	1,268
California	24,395	24,344	24,351	23,930	25,152	25,185	26,573	28,184	29,718	31,920
Colorado	3,562	3,511	3,519	3,335	3,554	3,765	3,790	3,808	4,213	4,443
Connecticut	3,450	3,610	3,652	3,574	3,700	3,576	3,753	3,871	4,288	4,471
Delaware	694	699	751	679	785	720	819	873	968	1,044
District of Columbia	1,865	1,822	1,773	1,734	1,784	1,826	1,828	1,918	1,992	2,038
Florida	6,175	6,066	6,152	5,882	6,454	6,375	7,063	7,315	8,222	9,284
Georgia	4,670	4,740	4,559	4,615	4,909	5,187	5,478	5,865	6,499	6,983
Hawaii	772	782	787	730	803	805	799	850	933	975
Idaho	407	445	422	390	408	448	457	516	557	580
Illinois	9,328	9,236	8,810	9,020	9,350	9,421	9,947	10,283	11,203	11,997
Indiana	4,328	4,261	4,126	4,026	4,234	4,271	4,749	4,796	5,172	5,769
Iowa	2,882	2,966	2,819	2,692	2,868	2,775	2,977	2,938	3,096	3,353
Kansas	1,733	1,645	1,581	1,621	1,735	1,684	1,821	1,797	1,894	2,018
Kentucky	1,914	1,863	1,755	1,872	1,898	1,940	2,134	2,124	2,232	2,606
Louisiana	2,643	2,459	2,485	2,476	2,429	2,291	2,518	2,588	2,676	3,086
Maine	408	416	388	397	417	425	458	456	508	563
Maryland	6,442	6,356	6,275	6,488	6,848	6,915	7,155	7,473	8,171	8,655
Massachusetts	13,440	13,580	13,352	13,589	14,220	14,623	15,332	15,411	17,006	17,984
Michigan	7,081	6,989	6,614	6,624	6,758	7,048	7,581	7,903	8,398	9,187

State Indicators

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Minnesota	3,315	3,327	3,167	3,122	3,277	3,326	3,507	3,509	3,781	4,190
Mississippi	1,040	969	988	1,012	1,021	1,019	1,173	1,200	1,251	1,479
Missouri	4,198	4,226	4,040	4,018	4,165	4,300	4,398	4,399	4,687	5,098
Montana	381	359	393	398	401	453	485	484	492	540
Nebraska	1,501	1,417	1,410	1,283	1,350	1,398	1,414	1,441	1,745	1,808
Nevada	608	563	575	599	595	644	708	755	806	883
New Hampshire	700	721	717	654	765	773	897	930	975	1,086
New Jersey	4,212	4,187	4,156	3,986	4,286	4,210	4,647	4,875	5,054	5,477
New Mexico	1,279	1,270	1,157	1,210	1,227	1,156	1,258	1,240	1,406	1,506
New York	17,290	17,113	16,415	16,122	17,230	17,534	18,283	18,784	20,174	21,451
North Carolina	6,698	6,703	6,558	6,680	6,925	6,894	7,269	7,531	8,106	8,775
North Dakota	417	371	389	357	356	354	404	466	518	614
Ohio	7,397	7,508	7,263	7,062	7,500	7,648	8,086	8,306	8,820	9,409
Oklahoma	1,452	1,385	1,284	1,359	1,370	1,394	1,609	1,555	1,784	1,813
Oregon	2,107	2,152	2,106	2,096	2,225	2,180	2,396	2,459	2,703	2,853
Pennsylvania	11,946	11,867	11,579	11,393	11,880	12,261	12,918	13,480	14,428	15,989
Rhode Island	1,254	1,218	1,207	1,280	1,269	1,241	1,300	1,390	1,468	1,585
South Carolina	1,762	1,688	1,750	1,706	1,865	1,908	1,987	2,064	2,273	2,418
South Dakota	223	223	182	208	200	213	218	244	250	318
Tennessee	3,110	3,122	3,030	3,053	3,066	3,178	3,202	3,486	3,779	4,079
Texas	12,665	12,602	12,231	12,138	12,786	12,755	13,382	14,209	15,269	16,814
Utah	2,084	2,192	2,147	2,093	2,178	2,204	2,323	2,341	2,644	2,850
Vermont	472	503	454	476	513	499	507	512	577	619
Virginia	4,516	4,456	4,459	4,088	4,639	4,806	4,973	5,283	5,512	6,073
Washington	4,310	4,192	4,014	4,219	4,414	4,425	4,699	4,888	5,071	5,504
West Virginia	709	639	631	523	600	607	585	666	714	771

State Indicators

State	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Wisconsin	4,236	4,018	4,018	3,920	4,025	3,889	4,119	4,317	4,665	4,957
Wyoming	318	296	283	276	239	239	299	297	326	349
Puerto Rico	291	315	282	275	272	294	325	438	375	443

State Indicators

Academic S&E article output

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
United States	272,857	280,745	284,972	290,585	297,551	311,490	315,453	320,978	323,622	321,941
Alabama	3,367	3,463	3,507	3,479	3,442	3,655	3,741	3,842	3,740	3,762
Alaska	317	352	407	366	395	423	407	445	413	415
Arizona	4,227	4,411	4,464	4,522	4,714	4,856	4,840	4,881	5,140	5,086
Arkansas	1,215	1,352	1,292	1,311	1,321	1,386	1,415	1,452	1,462	1,405
California	32,783	33,740	34,022	34,901	35,499	36,640	37,256	37,133	37,100	36,799
Colorado	4,597	4,575	4,699	4,798	4,894	5,436	5,618	5,882	6,041	6,050
Connecticut	4,626	4,546	4,747	4,933	4,930	5,255	5,454	5,537	5,798	5,680
Delaware	1,032	1,073	1,112	1,095	1,027	1,119	1,137	1,167	1,142	1,091
District of Columbia	2,067	2,154	2,095	2,160	2,276	2,436	2,465	2,491	2,652	2,561
Florida	9,713	9,951	10,168	10,441	10,564	10,865	11,228	11,368	11,115	11,324
Georgia	6,976	7,531	7,447	7,696	7,986	8,271	8,415	8,703	8,826	8,792
Hawaii	1,043	1,141	1,164	1,130	1,152	1,161	1,136	1,216	1,238	1,168
Idaho	669	683	657	720	660	759	669	753	789	730
Illinois	12,214	12,633	12,775	12,953	13,247	13,573	13,593	13,824	14,012	14,124
Indiana	6,054	6,226	6,324	6,529	6,853	6,988	7,202	7,185	7,520	7,462
Iowa	3,346	3,326	3,456	3,424	3,416	3,418	3,464	3,593	3,682	3,588
Kansas	1,975	2,006	2,000	2,252	2,295	2,407	2,429	2,429	2,384	2,504
Kentucky	2,541	2,685	2,720	2,596	2,685	2,893	2,862	2,901	2,839	2,839
Louisiana	2,719	2,671	2,713	2,778	2,960	2,993	2,891	2,848	2,738	2,764
Maine	557	607	536	592	584	613	594	611	610	560
Maryland	8,659	9,046	8,925	8,908	9,161	9,742	9,976	10,266	10,279	10,498
Massachusetts	18,871	19,009	19,636	20,002	20,458	22,025	22,426	22,681	23,340	22,780
Michigan	9,259	9,610	9,750	10,315	10,400	11,030	10,996	11,320	11,268	11,287

State Indicators

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Minnesota	4,093	4,384	4,366	4,576	4,566	4,875	4,702	4,809	4,718	4,729
Mississippi	1,555	1,483	1,631	1,647	1,620	1,631	1,676	1,663	1,687	1,544
Missouri	5,222	5,358	5,582	5,577	5,618	5,657	5,791	5,826	5,913	5,835
Montana	637	642	627	623	606	647	657	626	670	674
Nebraska	1,792	1,827	1,784	1,780	1,817	2,010	1,973	2,037	2,023	2,130
Nevada	969	991	1,076	1,038	1,032	1,039	940	949	936	983
New Hampshire	1,137	1,128	1,078	1,138	1,186	1,156	1,210	1,235	1,253	1,300
New Jersey	5,527	5,634	5,615	5,638	5,613	5,832	5,883	5,967	5,739	5,812
New Mexico	1,519	1,577	1,539	1,582	1,536	1,569	1,579	1,569	1,712	1,645
New York	22,391	22,576	22,778	23,208	23,669	24,485	25,251	25,704	25,907	25,706
North Carolina	9,102	9,788	9,711	9,868	10,234	10,890	11,282	11,420	11,544	11,290
North Dakota	641	610	718	663	738	744	787	832	832	859
Ohio	9,567	9,834	9,879	9,830	9,906	10,573	10,712	11,023	11,055	10,990
Oklahoma	1,842	1,901	2,052	2,121	2,130	2,322	2,323	2,360	2,249	2,315
Oregon	2,939	3,055	3,098	3,015	2,977	3,280	3,363	3,308	3,480	3,421
Pennsylvania	15,959	16,287	16,791	16,748	17,598	18,440	18,251	18,800	18,837	18,757
Rhode Island	1,676	1,654	1,692	1,684	1,785	1,863	1,962	1,989	2,057	2,061
South Carolina	2,464	2,463	2,689	2,665	2,846	2,983	2,959	3,111	3,153	3,238
South Dakota	304	382	404	426	465	517	534	561	534	536
Tennessee	4,228	4,355	4,608	4,641	4,743	5,083	5,186	5,409	5,465	5,436
Texas	17,061	17,910	18,377	18,958	19,744	21,084	21,091	21,753	21,595	21,535
Utah	2,971	3,111	3,045	3,175	3,314	3,592	3,613	3,648	3,670	3,748
Vermont	659	665	648	641	664	659	694	714	736	668
Virginia	6,090	6,400	6,696	6,813	6,945	7,248	7,490	7,398	7,589	7,662
Washington	5,454	5,592	5,650	5,596	5,861	6,096	6,117	6,211	6,207	6,226
West Virginia	812	819	820	911	912	1,010	969	1,026	977	1,116

State Indicators

State	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wisconsin	5,080	5,293	5,246	5,370	5,396	5,616	5,751	5,787	5,869	5,665
Wyoming	380	421	422	408	440	484	486	540	531	474
Puerto Rico	546	526	549	558	597	507	514	468	515	501

State Indicators

Academic S&E article output

State	2016	2017	2018
United States	320,018	323,104	319,627
Alabama	3,715	3,898	3,957
Alaska	348	368	333
Arizona	5,171	5,100	5,220
Arkansas	1,482	1,556	1,555
California	36,065	36,499	36,410
Colorado	6,153	6,286	6,557
Connecticut	5,695	5,553	5,380
Delaware	1,015	1,074	1,065
District of Columbia	2,449	2,484	2,462
Florida	11,502	11,897	12,017
Georgia	8,669	8,628	8,605
Hawaii	1,156	1,049	1,088
Idaho	763	791	830
Illinois	13,799	13,918	13,427
Indiana	7,427	7,623	7,633
Iowa	3,517	3,662	3,601
Kansas	2,508	2,525	2,542
Kentucky	2,784	2,806	2,801
Louisiana	2,666	2,652	2,660
Maine	578	616	622
Maryland	10,388	10,330	10,159
Massachusetts	22,316	22,200	21,618
Michigan	11,357	11,492	11,298

State Indicators

State	2016	2017	2018
Minnesota	4,679	4,787	4,755
Mississippi	1,653	1,626	1,686
Missouri	5,730	5,890	5,783
Montana	667	641	701
Nebraska	2,163	2,184	2,205
Nevada	995	1,013	1,148
New Hampshire	1,216	1,244	1,256
New Jersey	5,794	5,851	5,660
New Mexico	1,571	1,594	1,568
New York	25,695	25,159	24,847
North Carolina	11,201	11,643	11,498
North Dakota	883	930	833
Ohio	10,720	10,912	10,646
Oklahoma	2,276	2,390	2,276
Oregon	3,530	3,591	3,484
Pennsylvania	18,439	18,218	17,971
Rhode Island	2,008	2,022	2,037
South Carolina	3,233	3,268	3,057
South Dakota	555	603	635
Tennessee	5,626	5,618	5,610
Texas	21,782	22,488	22,140
Utah	3,689	3,857	3,749
Vermont	708	658	679
Virginia	7,603	7,860	7,523
Washington	6,447	6,355	6,136
West Virginia	1,079	1,165	1,162

State Indicators

State	2016	2017	2018
Wisconsin	5,733	5,657	5,433
Wyoming	505	483	506
Puerto Rico	490	465	410
<i>Science and Engineering Indicators</i>			

State Indicators

SEH doctorate holders in academia

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
United States	237,190	222,450	251,740	268,570	280,340	280,400	302,000	316,900	336,950	334,100
Alabama	4,560	3,200	3,000	3,180	3,320	3,400	3,600	3,900	4,750	4,550
Alaska	450	400	530	600	580	700	700	800	800	600
Arizona	2,920	2,900	3,170	3,410	3,800	3,900	3,900	4,600	4,400	5,050
Arkansas	1,520	1,650	1,600	1,840	1,930	1,500	2,000	1,900	2,850	2,900
California	24,780	21,150	25,140	28,530	27,620	29,500	31,800	33,800	36,700	37,300
Colorado	4,410	4,050	4,850	5,060	5,310	5,000	5,600	6,200	6,650	6,550
Connecticut	3,870	4,250	4,180	4,190	4,460	4,900	5,200	5,200	5,350	5,500
Delaware	720	500	760	740	840	800	900	1,000	1,200	950
District of Columbia	1,900	2,250	2,500	2,370	2,290	2,000	2,300	2,800	3,650	3,550
Florida	6,530	6,550	7,750	8,250	9,040	9,300	10,700	12,300	10,550	10,200
Georgia	5,550	5,350	6,340	6,960	7,370	7,800	8,400	8,600	8,550	8,900
Hawaii	1,250	1,100	1,500	1,760	1,550	1,800	1,600	1,800	1,600	1,650
Idaho	780	750	930	1,140	1,380	1,300	1,200	1,400	1,150	1,200
Illinois	10,190	9,200	10,570	10,510	11,390	11,100	12,200	11,700	14,200	13,350
Indiana	4,550	4,650	5,610	5,740	6,080	5,800	6,700	7,000	7,700	7,350
Iowa	3,100	3,000	3,160	3,370	3,500	3,900	3,900	3,800	4,250	4,300
Kansas	2,240	1,850	2,200	2,320	2,560	2,700	2,500	2,600	3,200	3,250
Kentucky	2,990	2,850	3,240	3,300	3,590	3,400	3,500	3,600	3,800	4,000
Louisiana	3,440	2,950	3,340	3,440	3,350	2,900	3,000	3,000	3,550	3,650
Maine	1,290	1,150	1,150	1,150	1,210	1,200	1,100	1,300	1,400	1,200
Maryland	5,920	4,850	5,830	6,800	7,180	7,800	7,900	8,600	10,200	10,100
Massachusetts	11,400	11,550	12,880	14,230	14,320	13,100	14,100	15,600	16,700	16,850
Michigan	7,760	7,250	8,720	8,890	9,340	8,800	10,200	10,500	10,750	10,400

State Indicators

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
Minnesota	4,330	4,700	5,290	5,390	5,650	5,300	6,000	6,200	6,550	6,700
Mississippi	1,940	1,900	1,950	2,030	1,980	1,900	1,900	2,000	1,950	2,400
Missouri	5,690	5,000	5,610	5,600	5,620	5,700	6,300	6,700	6,800	7,150
Montana	990	1,000	810	1,070	1,200	1,200	1,300	1,300	1,300	1,600
Nebraska	2,280	1,600	1,940	1,830	1,820	1,800	2,100	1,900	2,450	2,600
Nevada	970	900	1,260	1,220	1,600	1,400	1,400	1,300	1,350	1,100
New Hampshire	1,090	950	1,210	1,240	1,210	1,500	1,600	1,600	1,700	1,800
New Jersey	4,870	4,450	5,430	5,690	6,030	6,000	6,300	6,700	6,550	6,100
New Mexico	2,280	1,600	2,760	2,810	2,070	2,200	2,300	2,300	2,100	1,800
New York	19,530	18,800	20,180	21,150	21,760	22,000	23,700	24,500	26,350	25,650
North Carolina	7,550	7,900	8,630	9,210	9,900	10,100	10,400	10,900	11,050	11,300
North Dakota	890	750	660	730	970	900	1,100	1,000	850	700
Ohio	9,560	9,150	9,760	10,330	10,120	9,700	10,100	10,800	12,250	11,750
Oklahoma	2,650	2,300	2,780	2,810	2,830	3,000	3,300	3,100	2,900	2,700
Oregon	2,620	2,750	3,120	3,640	3,520	3,300	3,500	3,900	5,350	5,200
Pennsylvania	11,770	12,300	13,280	15,270	15,770	14,700	16,000	16,200	18,900	16,750
Rhode Island	1,680	1,700	1,670	2,070	1,990	1,700	1,600	1,700	1,550	1,500
South Carolina	3,120	2,550	2,920	2,810	3,450	3,500	3,600	3,700	3,200	4,100
South Dakota	670	650	610	620	660	700	700	800	700	850
Tennessee	4,630	4,250	4,710	5,090	5,500	5,400	6,000	6,100	5,750	5,250
Texas	13,410	11,850	13,620	14,750	16,570	17,600	19,300	20,000	21,700	21,550
Utah	3,010	2,450	3,030	2,730	3,520	3,400	3,500	3,900	4,050	4,350
Vermont	1,080	1,000	980	1,020	1,000	900	900	1,000	1,350	1,250
Virginia	5,390	6,000	6,520	7,010	7,630	8,300	8,400	8,400	9,100	9,200
Washington	5,240	5,000	6,250	6,620	7,000	7,100	7,200	7,700	7,300	7,150
West Virginia	1,160	1,100	1,130	1,190	1,320	1,200	1,300	1,600	1,450	1,550

State Indicators

State	1997	1999	2001	2003	2006	2008	2010	2013	2015	2017
Wisconsin	5,290	4,950	5,030	5,000	5,720	5,900	6,700	7,200	6,250	6,500
Wyoming	560	550	570	490	490	500	500	500	450	750
Puerto Rico	640	850	1,040	1,300	1,270	1,300	1,500	1,800	1,500	1,350

Science and Engineering Indicators